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(54) Title: A CONFIGURABLE ELECTRONIC TRADING SYSTEM AND THE METHOD THEREFOR
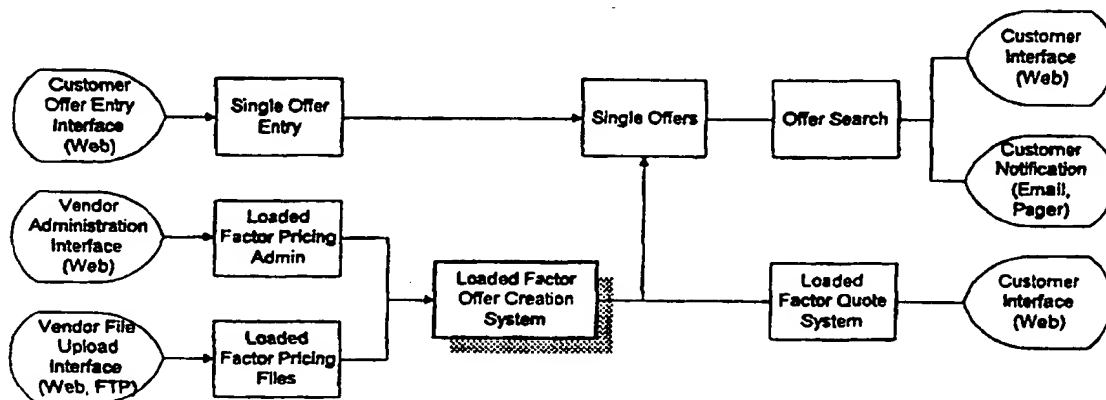
(57) Abstract

A configurable electronic trading system and the method therefor are disclosed, said system is used by a plurality of users and comprises: a computer system, a database provided in said computer system; means for receiving data including product information, price factors, and a set of price factor options for each price factor specified input from an authorized user and storing said data in said database; means for retrieving said data including product information, price factors and price factor options from said database and processing said data according to a pre–determined mathematical relation to create multiple single offers in said database; and means for receiving another user's selection to the price factor options of the respective price factors and providing a corresponding offer from the multiple single offers in said database to said another user. This system and method allow a trader to enter offers more rapidly, and allow a customer user to change his selection on the terms and get changed offers with a new price from the vendor instantly, thereby are more efficient to the users.

A configurable electronic trading system and the method therefor

5   FIELD OF THE INVENTION

The present invention relates to an electronic trading system or E-commerce system, and specifically, relates to an extension of an electronic trading system built on a database allowing a vendor user to create offers which are then searchable by other users, and allowing a customer user to change his

10   selection on the terms and providing variable offers to the customer user.

BACKGROUND OF THE INVENTION

What the traders are currently dealing with is the world trade market, and traders need to trade with traders in other countries efficiently and reliably,

15   therefore electronic trading systems are used wider and wider in the international trade practice in recent years.

Usually the trading system will allow a trader to create a single offer using an interface whereby each element of the offer is entered individually and a unit

20   price is specified.

The task of the offer entry interface is to capture all the details of the offer and generate a single offer record in the database, which is then searchable by all the traders using the system via a search interface.

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Fig.1 illustrates a block diagram of a conventional electronic trading system. In Fig.1, a single offer is input via a customer offer entry interface(Web) then searched by other traders, and if a matching result is obtained, the matching result is sent to the trader and the trader is informed via a customer notification interface, such as Email or pager.

However, the unit price of a product is not constant, it changes depends on various factors. In the real world of trading, a trader who specializes in selling product will have a particular product which is sold for different prices depending on a number of terms such as: Shipping Time, Quantity, Payment Term, Shipping Destination etc. All these factors affect the unit price. Therefore, with the conventional trading system, the seller can not provide offers with different prices dependent on changed terms, he has to enter multiple offers, each with different factors and a different unit price; and the buyer can not get a new price offer from the seller instantly after he changes the terms.

Therefore, the conventional electronic trading system is not convenient or time efficient for a user to handle offer entry and output process. When a vendor uses such a system it does not give the required flexibility to enter a large amount of offer options in a short period of time, and when a customer user changes his selection on the terms it can not provide changed offers to the customer user. Therefore, the efficiency of the conventional trading system for transmitting information between the users is limited.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide an configurable electronic trading system and the method therefor allowing a trader to enter offers more rapidly, and allowing a customer user to change his selection on the terms and get changed offers with a new price from the vendor instantly.

To achieve the above objects and advantages, the present invention provides a computer trading system used by a plurality of users, comprising: a computer system; a database provided in said computer system; means for receiving data including product information, price factors, and a set of price factor options for each price factor specified input from an authorized user and storing said data in said database; means for retrieving said data including product information, price factors and price factor options from said database and processing said data according to a pre-determined mathematical relation to create multiple single offers in said database; means for receiving another user's selection to the price factor options of the respective price factors and providing a corresponding offer from the multiple single offers in said database to said another user.

It is preferred that said trading system further comprises means for providing and displaying a unit price generated in accordance with the mathematical relation based on said another user's selection to the price factor options of the respective price factors to said another user.

Advantageously, said trading system further comprises a search engine for comparing and matching a requirement input by a user with other users' offers

stored in the database and returning matching results to said user; and said users interface to said trading system is via the internet.

The present invention further provides a data processing method used in a computer trading system, wherein said trading system includes a computer system and a database provided in the computer system, said method comprising the steps of: receiving data including product information, price factors, and a set of price factor options for each price factor specified input from an authorized user and storing said data in said database; retrieving said data including product information, price factors and price factor options from said database and processing said data according to a pre-determined mathematical relation to create multiple single offers in said database; and receiving another user's selection to the price factor options of the respective price factors and providing a corresponding offer from the multiple single offers in said database to said another user

It is preferred that said step for receiving another user's selection and providing offer includes a step of providing and displaying a unit price generated in accordance with the mathematical relation based on said another user's selection to the price factor options of the respective price factors to said another user.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig.1 illustrates a block diagram of a conventional electronic trading system;

Fig. 2 shows the basic structure of the configurable computer trading system of the present invention;

Fig. 3 illustrates a web-based clients communicating over the internet to an information server according to an embodiment of the invention;

Fig. 4   illustrates the main data flow diagram of the present invention;

Fig. 5 shows the basic data structures involved in entering loaded-factor product and price information;

Fig. 6a   shows the high-level flowcharts of the loaded-factor offer creation process;

Fig. 6b   shows a finer-detail flowchart of the "get first factor set" procedure mentioned in the flowchart in Fig. 6a;

Fig. 6c   shows a finer-detail flowchart of the "get next factor set" procedure mentioned in the flowchart in Fig. 6a;

Fig. 7 illustrates an example of the user interface for the trader who sells products (vendor) according to the present invention;

Fig. 8 illustrates an example of the customer user interface provided by the configurable computer trading system according to the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Reference will now be made in detail to the preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings.

Fig. 2 shows the architecture of the configurable computer trading system of the present invention.   As described above and shown in Fig. 1, the conventional trading system only allows the creation of single offer and for those to be searched by a searching component. As shown in Fig. 2, the configurable computer trading system according to an embodiment of the

present system comprises a loaded factor pricing file module for inputting the price factors and price options and storing them in the database in the system; a loaded factor pricing administration module for modifying the existing price factor already stored in the database. In this trading system, the seller or vendor is allowed to enter a range of products, prices and price factors and these data is converted into a whole range of single offers by the configurable Loaded Factor Offer Creation System. The newly created offers can then be searched using the existing search technologies. The Loaded Factor Quote System is used for receiving from a customer interface(web) buyer's selection to the price factors and price factor options and providing a corresponding offer from the multiple single offers in said database to said another user, this will be described more below.

Fig. 3 illustrates a web-based clients communicating over the internet to an information server according to an embodiment of the invention. As shown in Fig. 3, the computer trading system according to the invention includes a object relational database provided in a web server. The vendor enters product and price information into the object-relational using a password protected web interface, i.e., create multiple single offers in the database. The customer can then obtain pricing information through the customer interface which uses data from the object relational database and process it using a custom program written in an interactive language understood by the web browser, where it runs. This custom program allows the customer to select the product and any number of pricing factor and produces an instant visible price quote.

Fig. 4   illustrates the main data flow diagram of the present invention. In Fig. 4, the product information and price factors is entered by a process of enter loaded factor price data and stored in the database as loaded factor price data. The loaded factor offer creation process is executed for retrieving the loaded

5   factor price data from the database, processing them according to a predetermined mathematical relation, which will be described in detail below, to generate a unit price for each single offer, and creating multiple single offers in the database. As an example, a typical product and set of price factors would consist of a product with 4 price factors each with 4 price factor

10   options. This would generate 4X4X4X4 = 256 offers, but this is only exemplary, not for limiting purpose.

The offers thus created in the database can be searched or matched by a search process or search engine when another user input his search

15   requirement or search criteria into the system, and the single offers matching the requirement is returned to the user as search results.

Fig. 5 shows the data structures created within the object relational database by the vendor administration interface of the Loaded-Factor Offer Creation

20   System. An offer grid includes a product with a base price and a number of price factors which affect the overall price of the order in some way.   These factors could be quantity, shipping date, shipping destination for example. The number of factors is configurable by the vendor in the vendor administration screen. Each price factor includes a description, a price

25   variation(PFV) and a number of factor options. Each factor option includes a description and a price factor option variation(FOV) assigned to the factor

option. How the base price, factor price, factor option price affect the overall price is determined by the Price Determination Equation which shows the mathematical relation linking the various price factors to the actual final price of the order. The price determination equation is used to generate a unit price for each single offer, and the mathematical relation thereof is as follows:

$$\text{Unit\_price} = \text{base\_price} \times \sum_N \text{PFV} \times \text{FOV} \quad \ldots\ldots(1)$$

here N is the total number of the price factors for a certain product.

The following tables show examples of the data structures.

Table 1

Product Table
Product_id
User_id
Product
Fixed
Specification
Base Price

Table 2

Price Factor Table
Factor_id
Product_id
Description
Price_variation

Table 3

Factor Option Table
Option_id Factor_id Product_id Description Price_variation

Table 4

Offer Table
Offer_id Product_id User_id

Fig. 6a   shows the detail flowcharts of the loaded-factor offer creation

5   process in Fig. 4. As shown in Fig. 6a, in the procedure, for each product, getting in the product first, then getting in all price factors and price factor options; using the input data, the single offers with unit prices for each possible combination of price factor options are generated according to the above described equation (1).

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The two procedures of getting all price factors and price factor options and getting single offers for each possible combination of price factor options is illustrated in more detail in the procedure A at the right of Fig. 6a. First, getting the factor set; then calculating all offer fields for new offer based on

15   current factor set ; creating a new offer in the database; and get next factor set; thereafter, judging if all possible combinations are exhausted, if yes, end the procedure; if not, go back to the step of "calculate all offer fields for new offer

based on current factor set".

Fig. 6b   shows a finer-detail flowchart of the "get first factor set" procedure B mentioned in the flowchart in Fig. 6a. At the beginning of procedure B, initializing factor count x to 1, then getting factor x where x=1; then initializing factor option count y=1, getting factor option y of factor x, i.e., factor option (x,y); setting value of factor x to factor option (x,y), and setting factor option index(x, i)=current factor option y; thereafter, judging if there are any more factors, if yes, go back to the step of get factor x where x=1; otherwise end procedure B.

Fig. 6c   shows a finer-detail flowchart of the "get next factor set" procedure C mentioned in the flowchart in Fig. 6a. At the beginning of procedure C, initializing factor count x to 1, then getting next factor x; setting initial factor option count y=factor option index(x,i); incrementing factor option count y by 1; at the next step, judging if the factor option count y is greater than number of factor option in factor x, if yes, go to procedure b; if not, go to procedure a.

In the procedure a, first getting factor option y of factor x, i.e., factor option(x,y); setting value of factor x to factor option (x,y); then setting factor option index (x,i)=current factor option y; and return the latest set of factors to the main program, then end procedure C.

In the procedure b, resetting the factor option count y to 1; setting factor option index (x,i)=current factor option count y; and setting value of factor x to factor option (x,y); then judging if there are any more factors; if yes, go

back to the step of getting next factor x in procedure C; otherwise setting no more factor sets available flag, then end procedure C.

Fig. 7 illustrates a diagram of an example of the vendor user interface provided by the configurable computer trading system according to the present invention. With the functions in this vendor user interface, the vendor user can create/edit products; create/edit price factors; and create/edit mathematical relation, so as to setup the data structures in the object relational structure, as described above. The data structures created by vendor interface are ultimately used by the customer user interface, which will be described in detail below.

Fig. 8 illustrates a diagram of an example of the customer user interface provided by the configurable computer trading system according to the present invention. With this customer user interface, the customer is presented with a list of products to choose from, and various price factors which affect the overall price of the order. The number of price factors is dependent on the data input by the vendor in the vendor user interface. The customer user interface uses technology inside the browser in order to perform an instant price quote when the customer selects the product and the factor options required by the order. After the customer selects the product and the options of the respective the price factors, a derived price or an instant price quote is provided based on the factors and their pre-determined mathematical relation.

Below is an example when a user of the trading system according to the present invention wants to enter the following information through the

interface provided by the system.

The User's company produces Orange Juice and delivers to customers. There are different factors that affect the price. The table below shows how user reflects the price based on the factors.

Table 5

Container		Can		Bottle			
	1		1		1.05		
Type		Regular		Diet			
	1.1		1		1.05		
Size		Medium		large			
	1.2		1		1.2		
Destination		Main Ports		Regional		Address	
	1.2		1		1.1		1.2
Quantity		100 Units		300 Units		600 Units	
	1.1		1		0.9		0.85

The user inputs these data into this system with the vendor user interface, and the system stores this information in the database as bellow.

Product

Product_id   0001
User_id   Orange Juice
      Product
      Fixed
Specification

Base Price   100

Price Factor

Factor_id	001	002	003	004	005
Product_id	0001	0001	0001	0001	0001
Description	Container	Type	Size	Destination	Quantity
Price_variation	1	1.1	1.2	1.2	1.1

Factor Option

Option_id	001	002
Factor_id	001	001
Product_id	0001	0001
Description	Can	Bottle
Price_variation	1	1.05

Option_id	001	002
Factor_id	002	002
Product_id	0001	0001
Description	Regular	Diet
Price_variation	1	1.05

Option_id	001	002
Factor_id	003	003
Product_id	0001	0001
Description	Medium	Large
Price_variation	1	1.2

Option_id	001	002	002
Factor_id	004	004	004
Product_id	0001	0001	0001
Description	Main Port	Regional Port	Address Delivery
Price_variation	1	1.1	1.2

5

Option_id   001   002   002
Factor_id   005   005   005
Product_id   0001   0001   0001
Description   100 Units 300 Units 600 Units
Price_variation   1   0.9   0.85

The trading system according to the invention automatically creates in the data base all the combinations available based on specified factors and each of the records will be with the price resulted from value tied to each factor. The following is the record set produced:

Table 6

		Container	Type	Size	Destination	Quantity	Price
1	Description	Can	Regular	Medium	Main Ports	100 Units	100.00
2	Description	Bottle	Regular	Medium	Main Ports	100 Units	105.00
3	Description	Can	Diet	Medium	Main Ports	100 Units	105.00
4	Description	Bottle	Diet	Medium	Main Ports	100 Units	110.25
5	Description	Can	Regular	Large	Main Ports	100 Units	120.00
6	Description	Bottle	Regular	Large	Main Ports	100 Units	126.00
7	Description	Can	Diet	Large	Main Ports	100 Units	126.00
8	Description	Bottle	Diet	Large	Main Ports	100 Units	132.30
9	Description	Can	Regular	Medium	Regional Ports	100 Units	110.00
10	Description	Bottle	Regular	Medium	Regional Ports	100 Units	115.50
11	Description	Can	Diet	Medium	Regional Ports	100 Units	115.50
12	Description	Bottle	Diet	Medium	Regional Ports	100 Units	121.28
13	Description	Can	Regular	Large	Regional Ports	100 Units	132.00
14	Description	Bottle	Regular	Large	Regional Ports	100 Units	138.60
15	Description	Can	Diet	Large	Regional Ports	100 Units	138.60
16	Description	Bottle	Diet	Large	Regional Ports	100 Units	145.53
17	Description	Can	Regular	Medium	Address Delivery	100 Units	120.00
18	Description	Bottle	Regular	Medium	Address Delivery	100 Units	126.00
19	Description	Can	Diet	Medium	Address Delivery	100 Units	126.00

20	Description	Bottle	Diet	Medium	Address Delivery	100 Units	132.30
21	Description	Can	Regular	Large	Address Delivery	100 Units	144.00
22	Description	Bottle	Regular	Large	Address Delivery	100 Units	151.20
23	Description	Can	Diet	Large	Address Delivery	100 Units	151.20
24	Description	Bottle	Diet	Large	Address Delivery	100 Units	158.76
25	Description	Can	Regular	Medium	Main Ports	300 Units	90.00
26	Description	Bottle	Regular	Medium	Main Ports	300 Units	94.50
27	Description	Can	Diet	Medium	Main Ports	300 Units	94.50
28	Description	Bottle	Diet	Medium	Main Ports	300 Units	99.23
29	Description	Can	Regular	Large	Main Ports	300 Units	108.00
30	Description	Bottle	Regular	Large	Main Ports	300 Units	113.40
31	Description	Can	Diet	Large	Main Ports	300 Units	113.40
32	Description	Bottle	Diet	Large	Main Ports	300 Units	119.07
33	Description	Can	Regular	Medium	Regional Ports	300 Units	99.00
34	Description	Bottle	Regular	Medium	Regional Ports	300 Units	103.95
35	Description	Can	Diet	Medium	Regional Ports	300 Units	103.95
36	Description	Bottle	Diet	Medium	Regional Ports	300 Units	109.15
37	Description	Can	Regular	Large	Regional Ports	300 Units	118.80
38	Description	Bottle	Regular	Large	Regional Ports	300 Units	124.74
39	Description	Can	Diet	Large	Regional Ports	300 Units	124.74
40	Description	Bottle	Diet	Large	Regional Ports	300 Units	130.98
41	Description	Can	Regular	Medium	Address Delivery	300 Units	108.00
42	Description	Bottle	Regular	Medium	Address Delivery	300 Units	113.40
43	Description	Can	Diet	Medium	Address Delivery	300 Units	113.40
44	Description	Bottle	Diet	Medium	Address Delivery	300 Units	119.07
45	Description	Can	Regular	Large	Address Delivery	300 Units	129.60
46	Description	Bottle	Regular	Large	Address Delivery	300 Units	136.08
47	Description	Can	Diet	Large	Address Delivery	300 Units	136.08
48	Description	Bottle	Diet	Large	Address Delivery	300 Units	142.88
49	Description	Can	Regular	Medium	Main Ports	600 Units	85.00
50	Description	Bottle	Regular	Medium	Main Ports	600 Units	89.25
51	Description	Can	Diet	Medium	Main Ports	600 Units	89.25
52	Description	Bottle	Diet	Medium	Main Ports	600 Units	93.71
53	Description	Can	Regular	Large	Main Ports	600 Units	102.00

54	Description	Bottle	Regular	Large	Main Ports	600 Units	107.10
55	Description	Can	Diet	Large	Main Ports	600 Units	107.10
56	Description	Bottle	Diet	Large	Main Ports	600 Units	112.46
57	Description	Can	Regular	Medium	Regional Ports	600 Units	93.50
58	Description	Bottle	Regular	Medium	Regional Ports	600 Units	98.18
59	Description	Can	Diet	Medium	Regional Ports	600 Units	98.18
60	Description	Bottle	Diet	Medium	Regional Ports	600 Units	103.08
61	Description	Can	Regular	Large	Regional Ports	600 Units	112.20
62	Description	Bottle	Regular	Large	Regional Ports	600 Units	117.81
63	Description	Can	Diet	Large	Regional Ports	600 Units	117.81
64	Description	Bottle	Diet	Large	Regional Ports	600 Units	123.70
65	Description	Can	Regular	Medium	Address Delivery	600 Units	102.00
66	Description	Bottle	Regular	Medium	Address Delivery	600 Units	107.10
67	Description	Can	Diet	Medium	Address Delivery	600 Units	107.10
68	Description	Bottle	Diet	Medium	Address Delivery	600 Units	112.46
69	Description	Can	Regular	Large	Address Delivery	600 Units	122.40
70	Description	Bottle	Regular	Large	Address Delivery	600 Units	128.52
71	Description	Can	Diet	Large	Address Delivery	600 Units	128.52
72	Description	Bottle	Diet	Large	Address Delivery	600 Units	134.95

INDUSTRIAL APPLICABLITY

As apparent from the above description, the configurable electronic trading system of the present invention allows a trader to enter offers more rapidly, and allowing a customer user to change his selection on the terms and get changed offers with a new price from the vendor instantly, in other words, advantageously, the present invention adds a level of sophistication to the conventional trading system and allows the users to handle the offer data more efficiently. Therefore, the efficiency of the trading system according to the present invention is increased, and it is more convenient and time-saving for the users including sellers and buyers to use this system.

Having described and illustrated the principles of the invention in the preferred embodiments thereof, it should be apparent that the invention can be modified in arrangement and detail without departing from the spirit and scope of the invention. All these modifications and variations should fall in the scope defined in the appended claims.

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Claims

1. A computer trading system used by a plurality of users, comprising:

a computer system;

a database provided in said computer system;

means for receiving data including product information, price factors, and a set of price factor options for each price factor specified input from an authorized user and storing said data in said database;

means for retrieving said data including product information, price factors and price factor options from said database and processing said data according to a pre-determined mathematical relation to create multiple single offers in said database; and

means for receiving another user's selection to the price factor options of the respective price factors and providing a corresponding offer from the multiple single offers in said database to said another user.

2. The computer trading system according to claim 1, wherein said product information includes a description and a base price.

3. The computer trading system according to claim 2, wherein each of said price factors includes a price factor variant PFV and a set of factor options.

4. The computer trading system according to claim 3, wherein each of said factor options includes a description and a factor option variant FOV.

5. The computer trading system according to claim 4, wherein said mathematical relation is input into the system by said user as following equation to generate a unit price for each single offer:

$$\text{Unit\_price} = \text{base\_price} \times \sum_N \text{PFV} \times \text{FOV} \quad \ldots\ldots(1)$$

here N is the total number of the price factors for a certain product.

6. The computer trading system according to claim 5, wherein said system further comprises means for providing and displaying said unit price generated in accordance with the equation (1) based on said another user's selection to the price factor options of the respective price factors to said another user.

7. The computer trading system according to claim 1, wherein said system further comprises a search engine for comparing and matching a requirement input by a user with other users' offers stored in the database and returning matching results to said user.

8. The computer trading system according to claim 1, wherein said users interface to said trading system is via the internet.

9. A data processing method used in a computer trading system, wherein said trading system includes a computer system and a database provided in the computer system, said method comprising the steps of:

i) receiving data including product information, price factors, and a set of price factor options for each price factor specified input from an authorized user and storing said data in said database;

ii) retrieving said data including product information, price factors and price factor options from said database and processing said data according to a pre-determined mathematical relation to create multiple single offers in said database; and

5   iii) receiving another user's selection to the price factor options of the respective price factors and providing a corresponding offer from the multiple single offers in said database to said another user.

10. The data processing method according to Claim 9, wherein said step i) includes the sub-steps of:

10   receiving a description and a base price for each product;

receiving a price factor variant PFV and a set of factor options for each of the price factors; and

receiving a description and a factor option variant FOV for each of the factor options.

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11. The data processing method according to Claim 10, wherein said step ii) further includes a step of:

performing calculation according to a mathematical relation input by said user

20   as follows to generate a unit price for each single offer:

$$\text{Unit\_price} = \text{base\_price} \times \sum_N \text{PFV} \times \text{FOV} \quad \ldots\ldots(1)$$

here N is the total number of the price factors for a certain product.

25   12. The data processing method according to Claim 11, wherein said step iii) includes a step of:

providing and displaying said unit price generated in accordance with the equation (1) based on said another user's selection to the price factor options of the respective price factors to said another user.
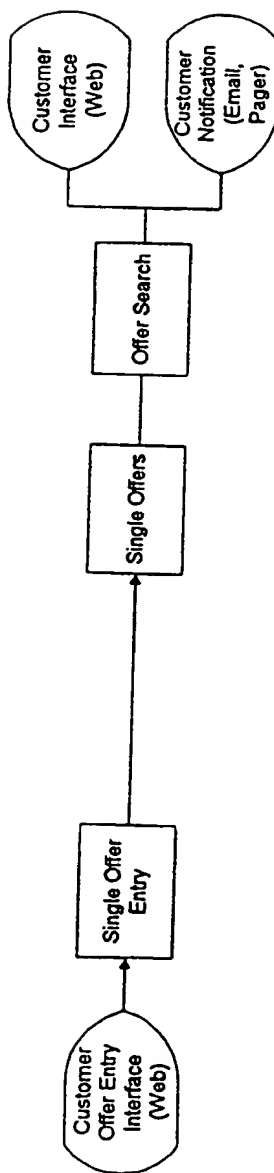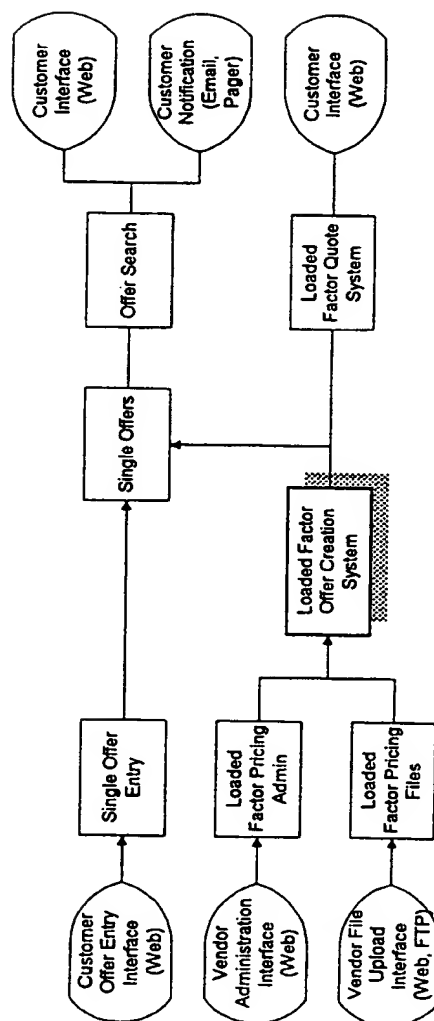
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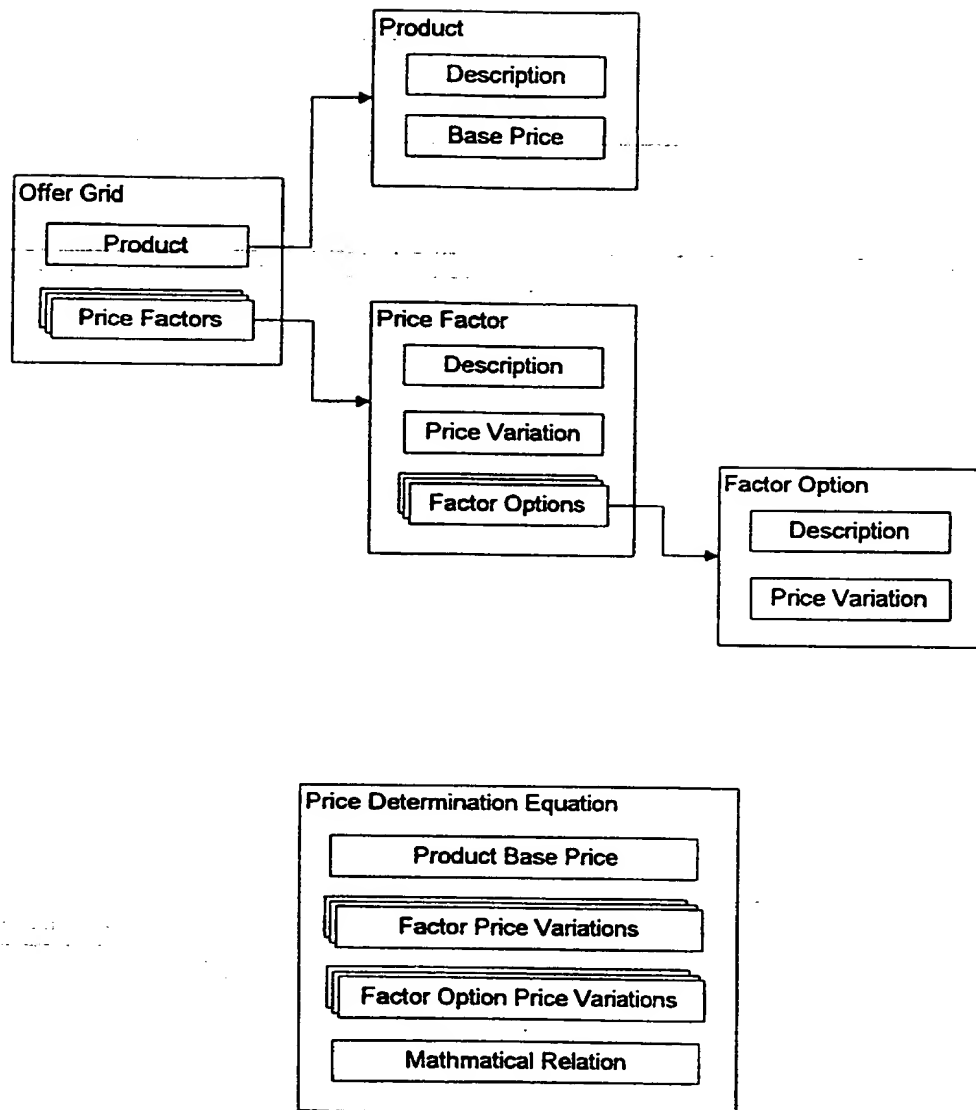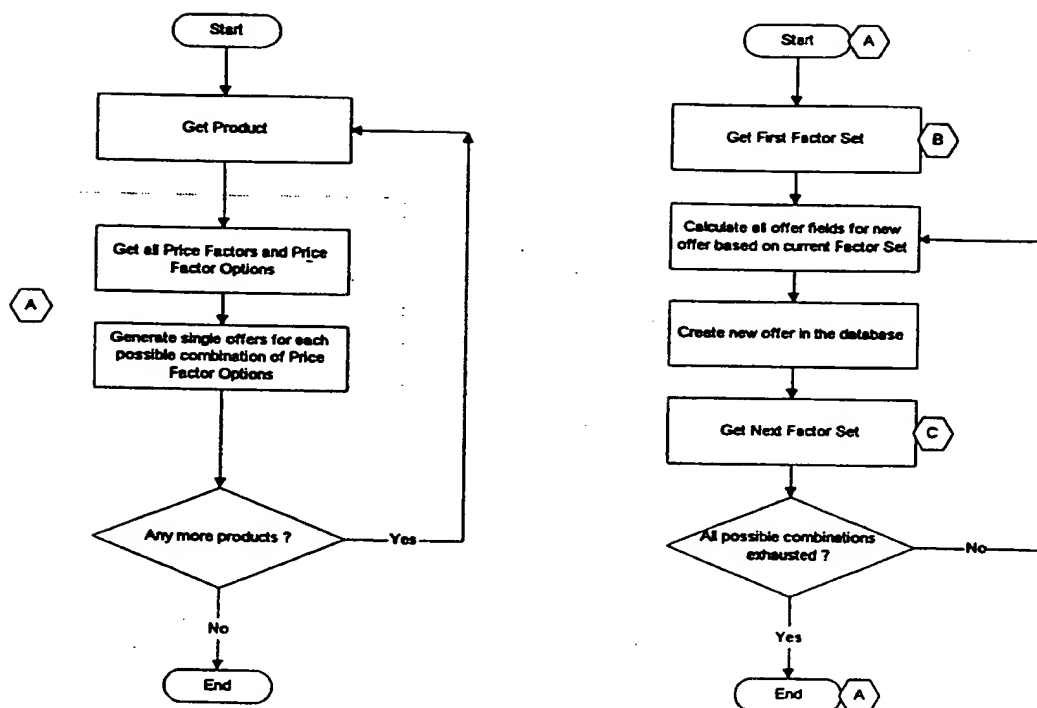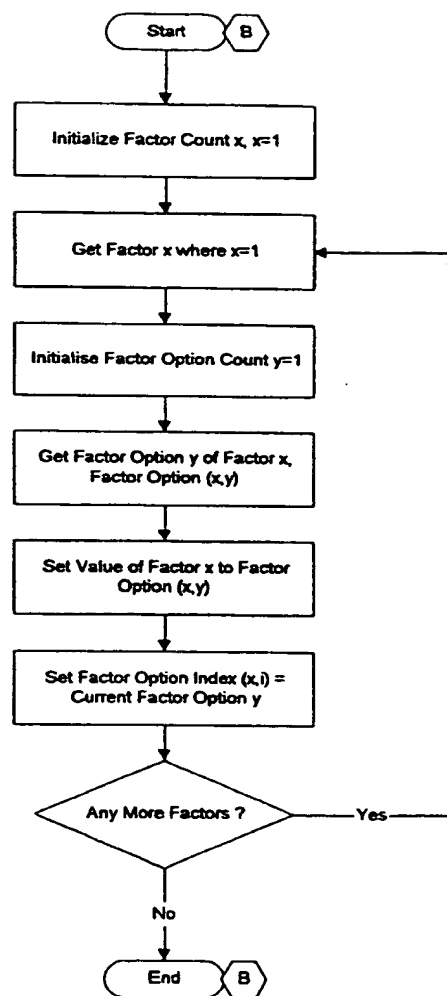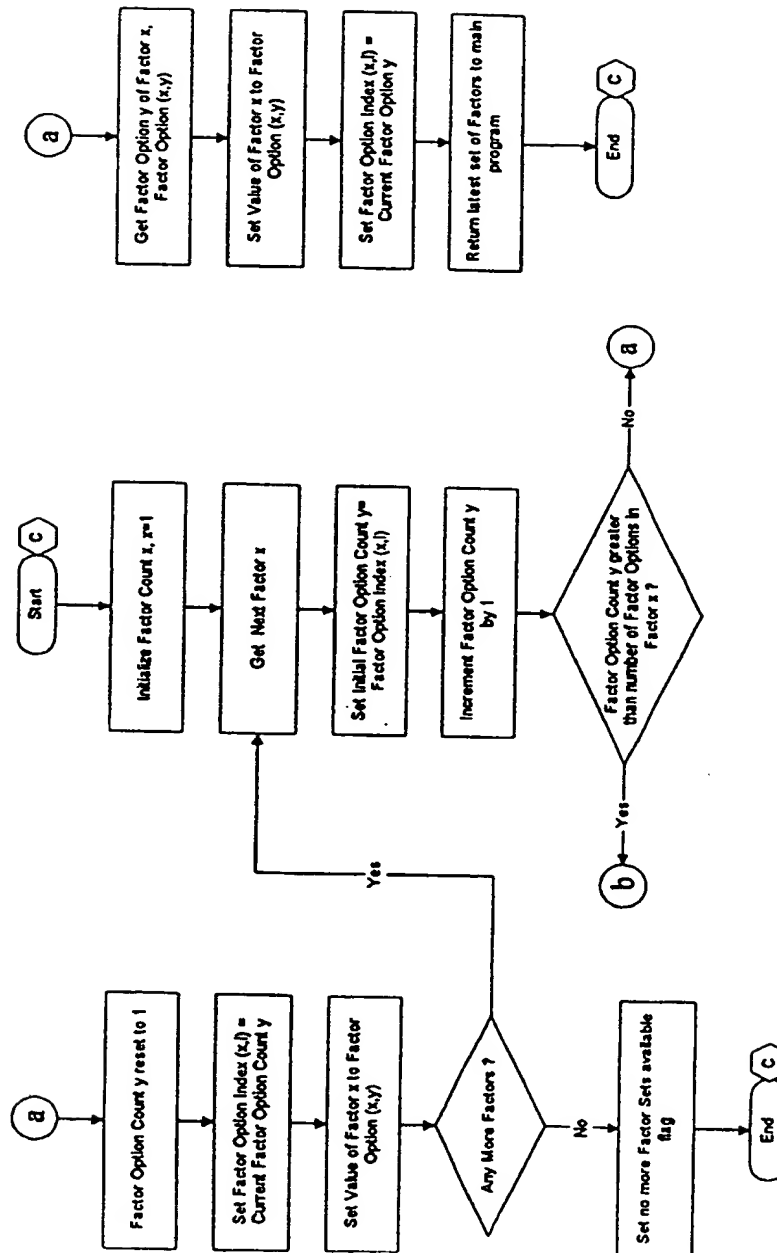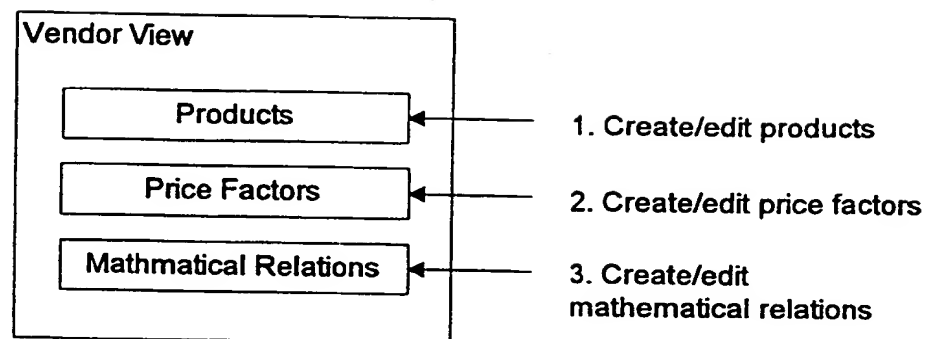
Fig. 1

Fig. 2

Fig. 3

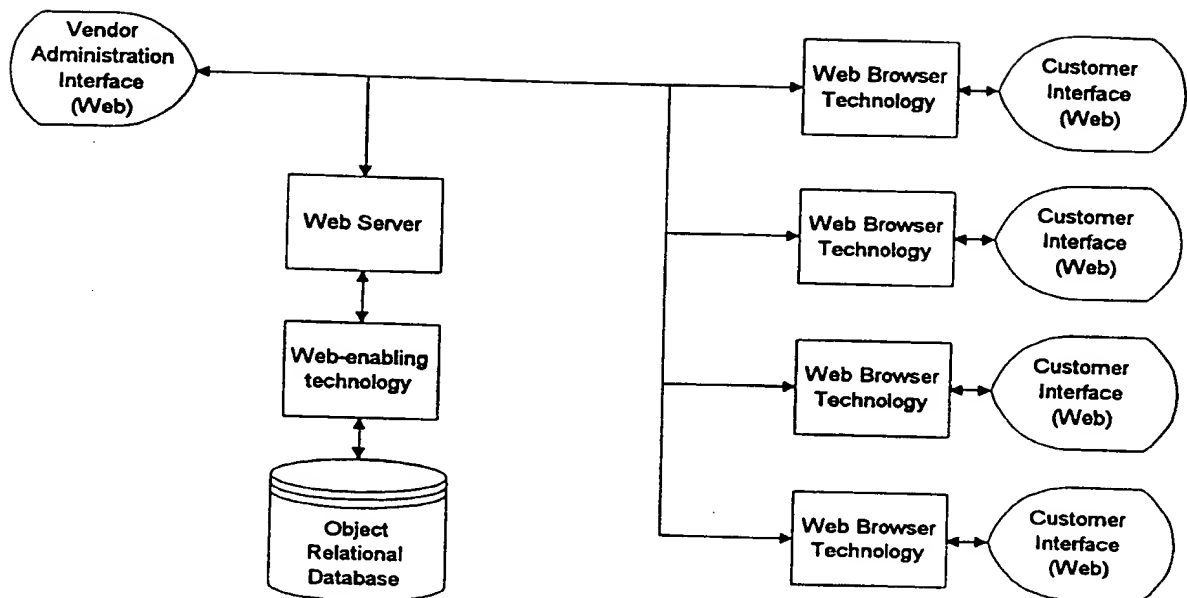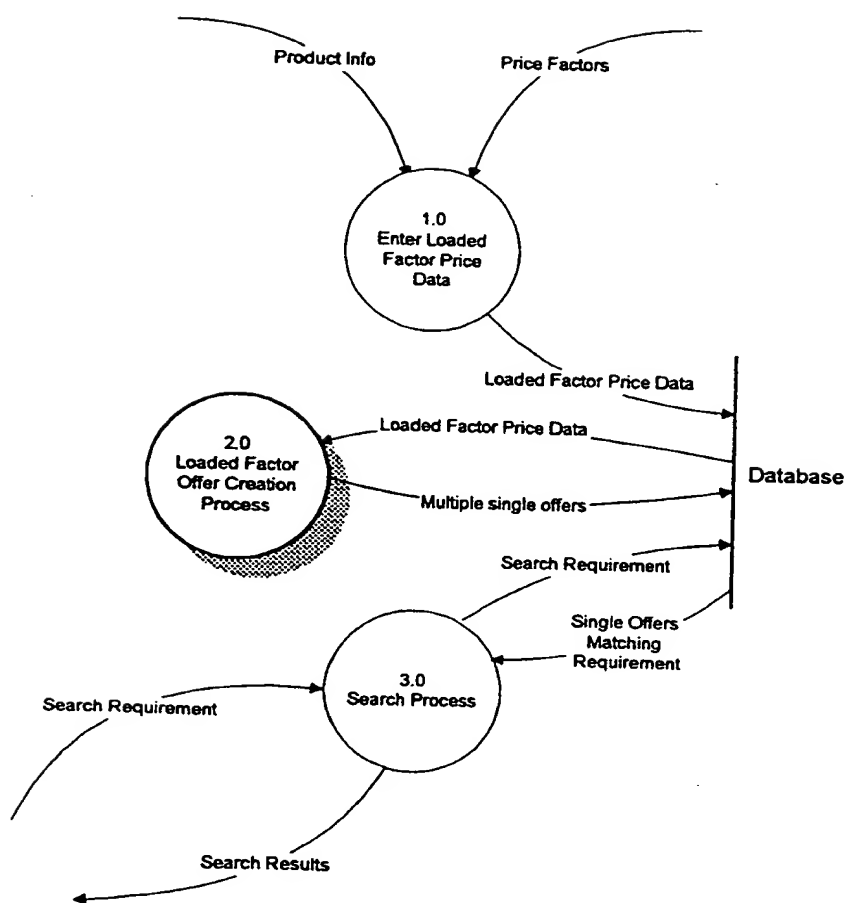Product Info   Price Factors

1.0
Enter Loaded
Factor Price
Data

Loaded Factor Price Data

2.0
Loaded Factor
Offer Creation
Process

Loaded Factor Price Data

Multiple single offers

Database

Search Requirement

Single Offers
Matching
Requirement

3.0
Search Process

Search Requirement

Search Results

Fig. 4

5/10

Fig. 5

Fig. 6

Fig. 7

8/10

Fig. 8

Fig. 9
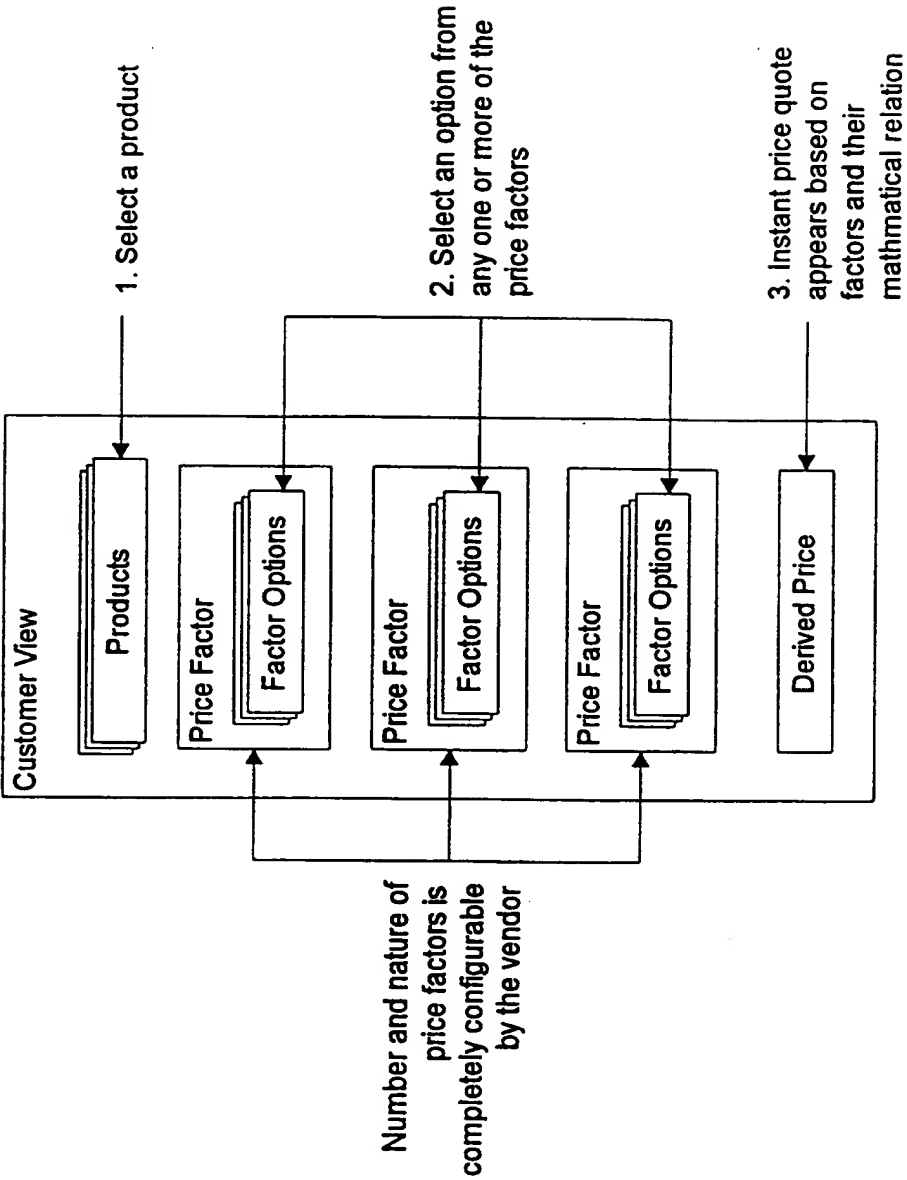
Fig. 10

INTERNATIONAL SEARCH REPORT

A.	CLASSIFICATION OF SUBJECT MATTER

IPC⁶ G06F 17/60

According to International Patent Classification(IPC) or to both national classification and IPC

B.	FIELDS SEARCHED IPC⁶ G06F 17/60, 17/30, 15/21

Minimum documentation searched(classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the field searched

Chinese Patent Documents since 1985

Electronic data base consulted during the international search(name of data base and, where practicable, search terms used)

WPI,PAJ

C.	DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant claim No.
A	CN-A-1147308(BELZBERG S H),09.APRIL.1997(09.04.97) The whole document	1- 12
A	EP-A-0762305(FUJITSU LIMITED),12.MAR.1997(12.03.97) The whole document	1- 12

☐ Further documents are listed in the continuation of Box C.   ☒ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
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"&" document member of the same patent family

Date of the actual completion of the international search 25.JUN.1998(25.06.98)	Date of mailing of the international search report 9 JUL 1998 (09.07.98)
Name and mailing address of the ISA/ The Chinese Patent Office 6, Xitucheng Road, Haidian District, Beijing, 100088, China Facsimile No. 86-10-62019451	Authorized officer Qu,Rui Telephone No. 86-10-62093829

International application No.

PCT/CN 97/00128

Patent document cited in search report	Publication date	Patent family members	Publication date
EP-A-0762305	12.03.97	JP-A-9073480	18.03.97
CN-A-1147308	09.04.97	CA-A-2119921	24.09.95
		WO-A-9526005	28.09.95
		AU-A-17520/95	09.10.95
		NO-A-963951	20.09.96
		HU-A-9602581	28.11.96
		EP-A-0752135	08.01.97